

Wed 6th November 2019

New cancer laboratory launches

The ACRF Tumour Metabolism Laboratory – part of the ACRF Centenary Cancer Research Centre – has been officially launched with the laboratory sporting the latest in advanced equipment and technology to help support the innovative cancer research. Cancer is the second leading cause of death globally.

The laboratory, established by a \$2.5M grant from Australian Cancer Research Foundation (ACRF) and in collaboration with the Centenary Institute, is dedicated to the study of tumour cell metabolism, at a molecular level. The team then utilise this knowledge to develop new cancer diagnostics, treatments and cures.

“Cancer cells, like all the cells in our body, require nutrients from our diet to survive and to flourish,” says Professor Philip Hogg, Deputy Director, Centenary Institute and Head, ACRF Centenary Cancer Research Centre.

“While our healthy cells mostly produce energy from these nutrients, cancer cells use them to suit their malignant purpose – which is to divide as rapidly as they can. They aggressively soak up the nutrients in their environment and convert them into the components of new cancer cells – that is DNA, protein and lipids. The focus of this laboratory is to understand how cancer cells change their metabolism. If we can successfully stop the cancer cells from changing their metabolism then we can use this knowledge as a basis for developing exciting new anti-cancer therapies.”

The state-of-the-art equipment now available to the researchers at the ACRF Tumour Metabolism Laboratory allows for the precise measurement – down to the nanoscale – of the sugars, proteins and lipids that are consumed by the cancer cells.

“Our equipment enables our scientists to remain at the forefront of research in the cancer metabolism field. We have mass spectrometers to measure glucose and lipid metabolites in tumour cells, a specialised microscope to measure glucose metabolism in tumour infiltrating T cells, a live-cell platform for measurement of tumour cell metabolism as well as a hi-tech instrument to measure protein-drug interactions,” says Professor Hogg.

The team of researchers at the ACRF Tumour Metabolism Laboratory have an impressive history of success as well as proven experience in developing potential new therapeutics that have been tested in cancer patients in Australia and the United Kingdom.

“We have gathered a committed team of first-rate cancer scientists who will make discoveries that will benefit our children and our children’s children,” says Professor Hogg.

“ACRF is delighted to have backed this program which will return significant research findings. Our support, through the provision of equipment for the research has been supplemented by a collaborative funding arrangement with Cancer Institute NSW who have assisted with complementary funding for research personnel. We so value the work that Professor Hogg and his team do to help deliver our supporters’ ambition to Outsmart Cancer,” says Kerry Strydom, CEO, Australian Cancer Research Foundation.

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IMAGES: Professor Philip Hogg, Deputy Director, Centenary Institute and Head, ACRF Centenary Cancer Research Centre. <https://drive.google.com/file/d/1-63Mnd78wqz1DonBPy8zMAM05WnOtBDj/view?usp=sharing>

About the Centenary Institute

The Centenary Institute is a world-leading independent medical research institute, closely affiliated to the University of Sydney and the Royal Prince Alfred Hospital. Our research focuses on three key areas: cancer, inflammation and cardiovascular disease. Our strength lies in uncovering disease mechanisms and applying this knowledge to improve diagnostics and treatments for patients.

For more information about the Centenary Institute, visit www.centenary.org.au

About the ACRF Centenary Cancer Research Centre

The ACRF Centenary Cancer Research Centre works to understand the link between diet, metabolism and tumour initiation and development at a molecular level, and to design new therapies using this knowledge. Hosting a team of over 50 dedicated cancer researchers with specialisations spanning from fundamental research to clinical trials, the Centre is located within the Charles Perkins Centre in Camperdown.

For more information about the ACRF Centenary Cancer Research Centre, visit https://www.centenary.org.au/cen_program/acrf-centenary-cancer-research-centre/

For media and interview enquiries, please contact

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About ACRF

Australian Cancer Research Foundation (ACRF) has the aspiration to create a world without cancer. Partnering with renowned research institutes across Australia, ACRF funds the technology, equipment and infrastructure needed to develop better prevention, earlier detection and more effective treatment methods across all cancer types. ACRF grants include funding to cover everything from laboratory equipment and software, to construction costs of buildings.

Since its formation in 1984, ACRF has provided over \$152 Million worth of funding for 73 cutting-edge cancer projects across 42 institutions. ACRF views the ongoing funding of research as a critical form of investment into the health and wellbeing of not only all Australians, but also the many people globally who will be diagnosed with cancer in their lifetime.

For more information about Australian Cancer Research Foundation, visit <https://www.acrf.com.au>

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